

Chapter 1 PURPOSE AND NEED FOR ACTION

1.1. Introduction:

Reclamation has authority for river channel maintenance on the Rio Grande between Velarde, New Mexico, and the headwaters of Caballo Reservoir. Reclamation monitors changes in the river channel. The evaluations include channel and levee capacity in an effort to keep track of river maintenance priority sites where there is concern about possible damage to riverside facilities.

There is one location (see Figure 1) called River Mile (RM) 111 priority site (Project) located on the west side of the Rio Grande (see map below), approximately 5.2 miles downstream of the San Acacia Diversion Dam. The Federal action addressed in this Environmental Assessment (EA) would be the execution of Low Flow Conveyance Channel (LFCC) and a non-engineered levee (levee) relocation activities at this priority site by Reclamation. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) [42 United States Code (U.S.C.) 4321, et seq.].

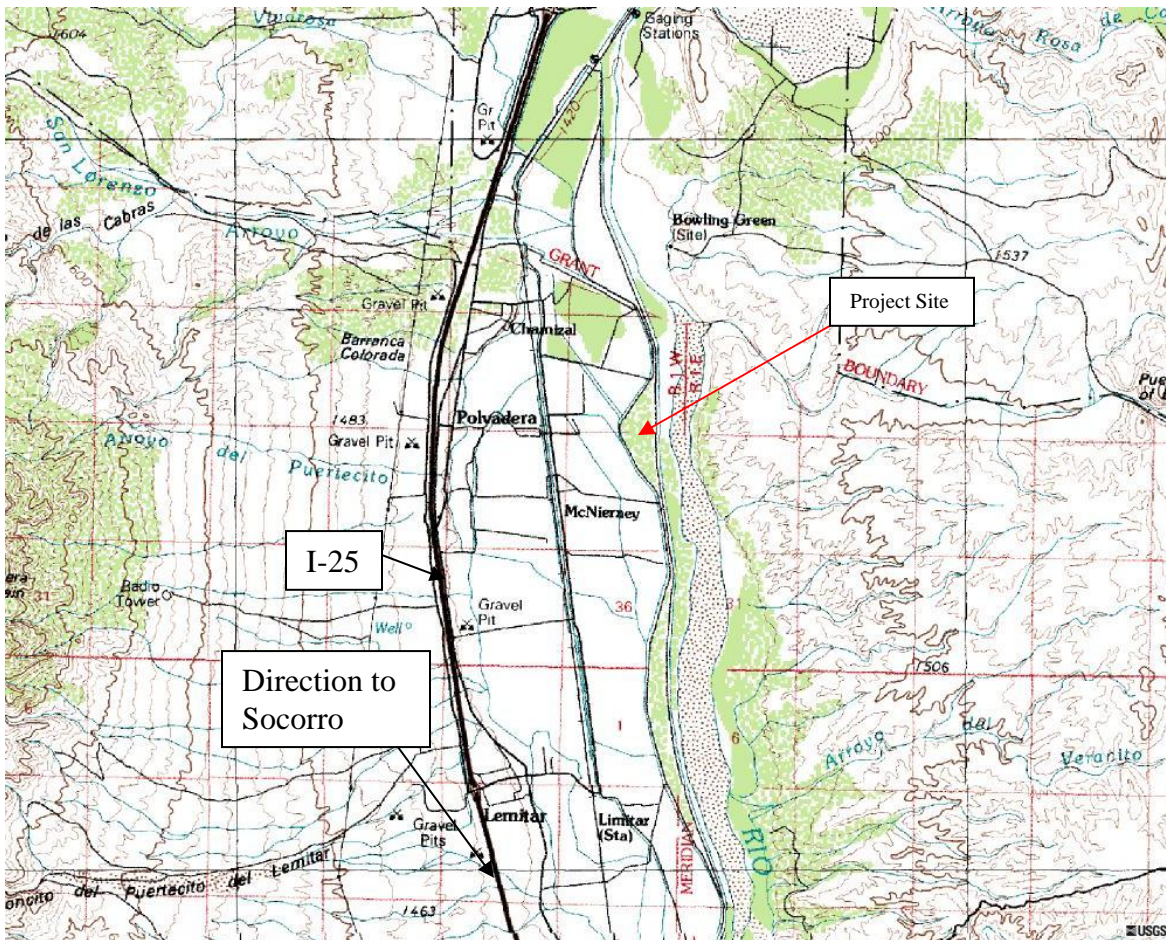


Figure 1, General location of the project

1.2. Proposed Action

At RM 111, Reclamation proposes to relocate the LFCC and the associated levee to the west to allow the river more freedom to move within its historic floodplain. A similar action was accomplished at the RM 114 and 113 priority sites, and is often referred to as the RM 114 to 113 levee setback. The planned maintenance action at the RM 111 will be referred to as the RM 111 Priority Site Project (Project).

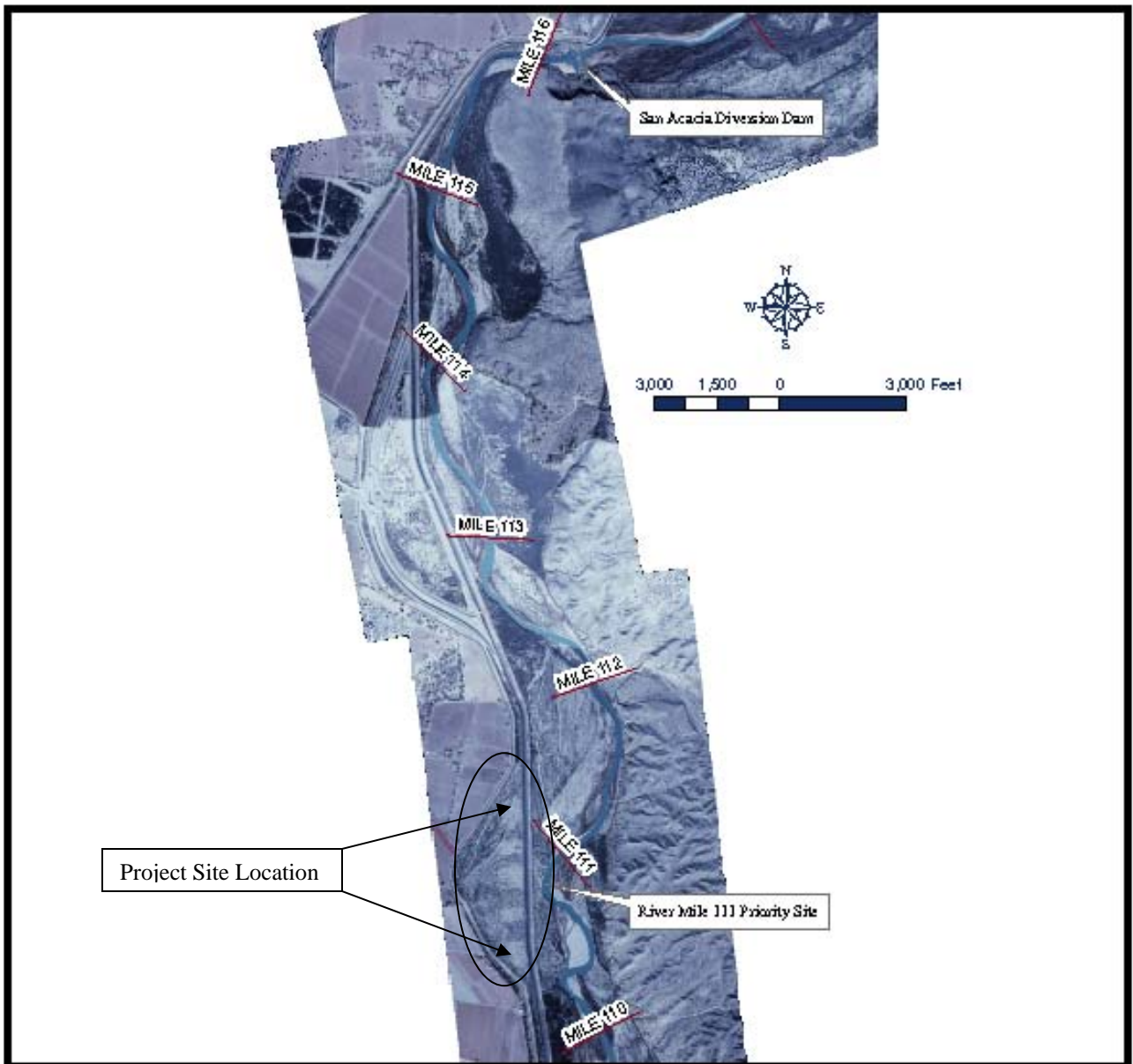


Figure 2, Location of the Project and priority site 111

1.3. Need for the Action

Geomorphic investigations have been completed for this reach and specifically for the RM 111 priority site (Massong, 2005). The Project is located at an actively migrating bend in the river. The concern is the proximity of the river channel to the LFCC and the rate at which this distance has been decreasing with sustained flood flows. Therefore, potential damage to the LFCC could occur unless a solution to the problem is implemented.

1.4. Purpose of the Action

In order to fulfill the need (described in section 1.3) for the action, Reclamation proposes to relocate the LFCC and the levee to the west. This action would provide protection to the LFCC from potential damage from the westward migration of the Rio Grande. Chapter 2 provides a detailed description of the proposed action.

1.5. Relevant Statutes, Regulations, and other Plans

The proposed action would be required to conform to the provisions of following regulations and associated federal and state agencies:

- 1.5.1.** Section 7 of the Endangered Species Act (ESA) administered by the U.S. Fish and Wildlife Service (Service).
- 1.5.2.** Section 106 of the National Historic Preservation Act (NHPA) administered by the New Mexico State Historic Preservation Officer (SHPO).
- 1.5.3.** Section 401 Certification of the Clean Water Act (CWA) administered by the New Mexico Environment Department Surface Water Quality Bureau (NMEDSWQB).
- 1.5.4.** Section 404 of the CWA administered by the Corps of Engineers.
- 1.5.5.** Section 402 of the CWA administered by the Environmental Protection Agency (EPA).
- 1.5.6.** Programmatic Agreement with the New Mexico State Historic Officer (NMSHPO).

1.6. Issues, Public Scoping

Public scoping, for the purpose of defining the issues regarding the implementation of the proposed action, included the following:

- 1.6.1.** Two scoping meetings were conducted. One meeting was a non-public meeting with representatives of the U.S. Fish and Wildlife Service (Service), Middle Rio Grande Conservancy District, Save Our Bosque Task Force (SOBTF) and Socorro County Fire Marshal at the office of SOBTF on June 5, 2007. The other was a public meeting held at Reclamation's Field Division Office located in Socorro on June 6, 2007, from 6:30 to 8:00 p.m. The purpose of both of these meetings was to find out what issues there may be as a result of the proposed action.

- 1.6.2. One field trip was conducted with representatives of the Reclamation engineering division, Corps of Engineers, and the Service on September 14, 2007 at the Project site to discuss the mitigation plan.

The following are a list of issues that have been identified:

- 1.6.2.1. Enhancement features of the Project for the Rio Grande Silvery Minnow proposed in a mitigation plan required by the Corps of Engineers.
- 1.6.2.2. Removal of Cottonwood and other native tree species.
- 1.6.2.3. Cultural Resource features of the LFCC.
- 1.6.2.4. Dust and noise effects to private land owners from construction activities to adjacent private land owner horse breeding operations.
- 1.6.2.5. Riparian zones within the LFCC that have all three indicators of wetlands, including hydric soils, hydrophytic vegetation, and wetland hydrology.
- 1.6.2.6. The affect on water resources as a result of realigning the LFCC and levee.

Chapter 2 ALTERNATIVES

2.1. Introduction

This chapter will be devoted to describing and comparing the alternatives including a summary of environmental consequences. The chapter has four sections as follows:

- 2.1.1. Description of Alternatives
- 2.1.2. Process Used to Consider, Select, and Eliminate Alternatives
- 2.1.3. Discussion of Proposed Alternative
- 2.1.4. Comparison of Alternatives, their Predicted Effects and Project Objectives (see page 21).

2.2. Description of Alternatives

2.2.1. Description of the No Action Alternative

If this action were selected, the priority site would continue to erode the west bank and eventually damage the Levee and possibly allow an avulsion into the LFCC.

2.2.2. Description of the Proposed Alternative

Realign the LFCC and the Levee to the west. See the discussion of the proposed alternative at section 2.4.

2.3. Process Used to Consider, Select, and Eliminate Alternatives

During the alternative selection process, four basic alternatives were analyzed, Levee and LFCC setback, Riprap Revetment, River Realignment, and no action. However, for the following reasons, the Levee and LFCC setback was selected over the other alternatives which could not provide the same benefits even though the overall cost was much the same: